CLASS SPECIFICATION

TITLE	GRADE	EEO-4	CODE
MASTER INFORMATION SPECIALIST II	43	B	7.909
MASTER INFORMATION SPECIALIST I	41	B	7.910

SERIES CONCEPT

Master Information Specialists provide the highest level of technical expertise regarding the information management system in an agency in one or more functional areas such as systems programming, information systems, database management, information systems project management, quality assurance, or computer networks.

Positions in this series are assigned duties and projects deemed critical to the agency mission. Duties are associated with major, long-term projects which significantly impact the agency's business processes. Without the successful completion of those duties and projects, there would be significant disruption to agency operations and reduced levels of service to the citizens of the State; reduced levels of public safety; and/or substantial loss of revenue to the State. Examples of such mission-critical projects and systems include:

* The Department of Motor Vehicles' Project Genesis, a business process re-engineering project designed to integrate all services provided to drivers, vehicle owners and businesses.

* The Integrated Financial System which merges the State's automated accounting, budgetary, procurement and personnel functions into a single system utilized by the Department of Administration, Department of Transportation, State Controller's Office, State Treasurer's Office and the Department of Personnel. The purpose of the system is to enable the State to meet mandated reporting requirements in conformance with Generally Accepted Accounting Principles; reduce the administrative costs of maintaining multiple separate systems; streamline financial management of the State's resources; meet internal user agency accounting requirements; and provide accurate, consistent data to agencies, the Legislature, the Governor and the general public.

* The Department of Human Resources, Welfare Division's NOMADS system which maintains all information related to child support collection/enforcement system, food stamps, aid to families with dependent children, Medicaid eligibility, and employment and training.

* The Department of Human Resources, Child and Family Services Division's Unity System which provides centralized records and information concerning the contacts of children, adolescents and families with all social service and juvenile justice agencies in the State.

* The Department of Employment, Training and Rehabilitation's Insurance Benefits System which maintains all pertinent data and generates payments to provide monetary relief to unemployed citizens of the State.

Positions in this class may be assigned permanent supervisory responsibility for the work of others, and they may be assigned project management responsibility. More frequently, incumbents function as individual contributors who possess advanced level experience and specialized skills, and provide technical expertise in one or more of the following areas:

Information systems analysis, design, development, maintenance and modification. Duties may include consultation with management to determine agency needs and system requirements, system construction and programming, and integration with existing hardware and software. Incumbents may be required to conduct detailed alternative analyses, cost/benefit analyses and determine end-user requirements. Duties

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SERIES CONCEPT (cont'd)

require advanced level communication with a variety of audiences such as end-users, technicians, vendors, management and others.

Systems programming including the analysis, design, development, maintenance and modification of computer and communications hardware, operating systems and auxiliary software packages required to support various information management systems, and back-up and recovery of the agency's software and data. Duties may also include long-range planning for both hardware and software products, and implementation of planning strategies, departmental policies and standards to ensure short- and long-term goals and objectives are achieved within fiscal and other resource limitations. Incumbents may be required to conduct detailed alternative analyses, cost/benefit analyses and determine end-user requirements.

Database management including responsibility for the maintenance of data dictionaries and repositories; control and authorized sharing of information with multiple users within and/or outside the organization; enterprise data modeling, database configuration, performance tuning, and back-up and recovery of data; application development; and utility executions and backup processing.

Information systems project management responsibility for specialized projects of significant size, scope and impact to agency operations. Duties may include serving as the project leader; planning, organizing and directing project activities; conducting cost/benefit analyses; resolving design conflicts; data administration; resource allocation; contract negotiation; timeline development; critical path tracking; justifying the need for additional resources; and coordination with other work units within and outside the organization.

Quality assurance including total oversight of one or more major information management projects from inception through procurement. Duties include ensuring deliverables meet technical and/or contract requirements within time and fiscal constraints, and in accordance with established standards of quality; analysis of system life-cycles and growth projections; developing test plan checklists and auditing project activities and processes; preparing comprehensive reports regarding project progress; and meeting with agency administrators, project committees, vendors, external contractors and others to resolve schedule and cost issues and report progress. Duties require a comprehensive understanding of technical issues regarding application design including system development methodology, computer interface, data warehousing techniques, and legal and regulatory requirements.

Computer network responsibility for the planning, design, implementation, performance tuning, troubleshooting and administration of multi-protocol (which may include TCP/IP, IPX, SNA, DLSW, and SDLC), geographically dispersed enterprise networks including local area network (LAN) and wide area network (WAN) switches, routers, multiplexers and campus switches, integrated WAN services, such as Switched 56, ISDN PRI & BRI, DSO, DSI, DS3 and microwave utilizing public and private service. Duties also involve integration of WAN topologies, including but not limited to ATM, PPP, HDLC, frame relay, and ISDN.

Positions allocated to this class are distinguished from lower level classes by the requirement of advanced level knowledge and skills acquired through specialized training and certification in a designated area of information technology. The required professional certification must indicate a degree of excellence and expertise not typical of information technology classes at lower and typically involves education, required work experience, and the assessment of an individual's competency in a field of expertise by means of a testing process. Such training and certification must be directly applicable to assigned duties and result in significant, on-going benefit to the agency. Certification requirements will be designated by the agency at the time the position is classified, and continued certification in the specialty area is considered a condition of employment.

Perform related duties as assigned.

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CLASS CONCEPTS

Master Information Specialist II: Positions allocated to this class work under administrative direction of an assigned supervisor and provide the highest level of technical expertise regarding the information management systems in an agency. Incumbents receive no technical supervision and may report to a supervisory or management position at the same or a lower grade level. Positions allocated to this class are distinguished from the lower level in the series by the scope and criticality of the duties and assignments performed, as well as the significant adverse impact on the agency's operations, activities and services if assigned duties and projects are unsuccessful. Incumbents are technical experts in a specific information management area in which they have received specialized training and certification from a nationally acknowledged organization.

Master Information Specialist I: Positions allocated to this class work under the general direction of an assigned supervisor or manager who may be at the same or lower grade level. Incumbents function as technical experts in a specific information management area in which they have received specialized training and certification from a nationally acknowledged organization.

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MINIMUM QUALIFICATIONS

SPECIAL NOTES AND REQUIREMENTS FOR ALL POSITIONS IN THIS SERIES:

*   Professional certification from a nationally recognized/accredited organization is required. The specific type of certification will be identified at the time of recruitment, and continued certification is a condition of employment.

*   Positions for which allocation to this series is requested will be reviewed by a committee of subject matter experts from outside the requesting agency. This peer review group will evaluate the description of duties and the specific certification or training requirements to ensure proper allocation of the position.

MASTER INFORMATION SPECIALIST II

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university with major course work in computer science, information systems, mathematics or related field of study and six years of progressively responsible professional data processing experience, three years of which were at the advanced journey level in a pertinent specialty area such as systems analysis, systems programming, database management, project management, quality assurance, computer or transport networks; **OR** an equivalent combination of education and experience. *(See Special Notes and Requirements)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):
Detailed knowledge of: various systems software products and their interrelationships; performance monitoring principles and related software products; vendor procedures for applying maintenance and temporary fixes; principles, practices, and procedures required to design, analyze and maintain systems hardware and/or systems software; principles, practices and procedures required to develop, design and implement information system-based solutions; planning, development and implementation of backup and recovery techniques and procedures for all data and applications software; administration of large complex networks to include wide area, campus, multi-agency or statewide enterprise multi-protocol networks.
Ability to: apply advanced level knowledge and skills to projects and assignments deemed critical to the agency's mission; analyze and resolve complex issues and problems which directly impact the agency's services to the public, collection of revenue, and/or public safety; provide the highest level of technical consultation and training to the agency in developing, enhancing, implementing and modifying information management systems which support the agency's business processes; maintain certification in systems

MINIMUM QUALIFICATIONS (cont'd)

MASTER INFORMATION SPECIALIST II (cont'd)

analysis and design, systems programming, database management, project management, quality assurance, or computer or transport networks; *and all knowledge, skills and abilities required at the lower level.*

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):
Working knowledge of: information technology needs and resources of the agency; regulations, policies and procedures applicable to the assigned computing environment; technological advancements in a specialty area of information technology.

MASTER INFORMATION SPECIALIST I

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in computer science, information systems, mathematics or related field of study and five years of progressively responsible professional data processing experience, two years of which were at the advanced journey level in a pertinent specialty area such as systems analysis, systems programming, database management, project management, quality assurance, or computer or transport networks; **OR** an equivalent combination of education and experience. *(See Special Notes and Requirements)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):
Detailed knowledge of: telecommunication technology and related systems software; principles, practices, and procedures required to design, analyze and maintain information system hardware and/or software; project control techniques, including cost estimating and resource scheduling; management of system software internals and system performance tuning techniques used in database management; network protocols; transport medium, transport theory and design; large, complex networks including wide area, campus, multi-agency or statewide enterprise multi-protocol networks; CORE switches in a WAN environment; protocols such as TCP/IP, IPX, SNA, SDLC and DSLW; network analysis concepts and techniques utilizing packet analyzers and the OSI model to troubleshoot to resolution; concepts, characteristics, and capabilities of computer operating platforms; complex operating system command languages; disaster recovery, data recovery and backup concepts and techniques; system integration hardware and data communications techniques as applied to network operations; enterprise addressing and subnetting in a multi-protocol environment; firewall, VPNM, DNS and ISP network services; large scale implementations of network services; network infrastructure design and management; enterprise dial-access servers, and multi-host services. **Working knowledge of:** various systems software products and their interrelationships; vendor procedures for applying maintenance and temporary fixes; principles, practices and procedures required to develop, design and implement information system-based solutions; administration of complex, large networks to include wide area, campus, multi-agency or statewide enterprise multi-protocol networks; performance monitoring principles and related software products; interdependence of software operating in a multi-functioning, multi-user data processing environment; principles, practices, and techniques used in the installation, maintenance and support of WAN switching, routers, multiplexors, and dial access servers. **Ability to:** maintain current certification in an information management specialty area; provide high-level technical consultation and training; anticipate and plan for future information system technologies; translate data structures and algorithms; recommend and implement major system changes and enhancements; analyze and coordinate the resolution of database, associated software, and data dictionary/repository problems; analyze multi-protocol, multi-transport wide area network problems; use problem isolation tools and techniques to troubleshoot complex system problems; troubleshoot routing protocols, router operating system problems and WAN hardware; develop and implement task lists, timetables, and appropriate testing methodology to ensure the highest quality product; communicate effectively with various audiences including senior management, vendors, contractors, professional and technical staff, and others.

MINIMUM QUALIFICATIONS (cont'd)

<u>MASTER INFORMATION SPECIALIST I</u> (cont'd)

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills and Abilities required for Master Information Specialist II.)

This class specification is used for classification, recruitment and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

	<u>7.909</u>	<u>7.910</u>
ESTABLISHED:	8/10/99UC	8/10/99UC
REVISED:	7/1/01LG	7/1/01LG